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Support for AppleWorks and ///EZ Pieces Users

How to Print Slashed Zeros

Dear NAUG:

Is there any way to configure AppleWorks 3.0 so I can print slashed zeros (Ø) with the ImageWriter II connected to my Apple IIc?

Andy Ritter
Audubon, Pennsylvania

[Douglas Gum responds: The trick to printing slashed zeros is to find a way to send the right control code to your printer. For the ImageWriter II, the code is

Escape D Control-@ Control A

Apple IIe and IIGS users can add these codes to the printer interface card settings for their printer. AppleWorks sends that code each time it prints a document; any codes that you put in this area affect every document you print on your system.

But AppleWorks "knows" that you have an Apple IIc. Since you do not use a printer interface card with the IIc, AppleWorks does not let you enter codes in the interface card settings area. Instead, try adding the codes to those already in the lines per inch settings area. AppleWorks sends those codes each time you print a document. Follow these steps:

1. With the AppleWorks 3.0 Main Menu on the screen, select #5, "Other Activities".
2. From the Other Activities Menu, select #6, "Select standard settings for AppleWorks."
3. From the Standard Settings Menu, select #6,

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"Specify information about your printer(s)."

4. From the Printer Information Menu, select "Change printer specifications" for your ImageWriter II.
5. From the Change A Printer Menu, select #5, "Printer Codes".
6. From the Printer Codes Menu, select #2, "Lines per inch".
7. From the Lines Per Inch Menu, select #1, "6 lines per inch".
8. Respond "No" to the "Is this OK?" prompt.

Now you will enter the codes for slashed zeros. Continue as follows:

9. Press the Escape Key, the letter "A", the Escape Key again, and the upper case "D". Then hold down the Control Key and the type a Shift-2 to generate the "Control-@" symbol. Type a Control-A. Finally, hold down the Apple Key and press the Return Key. (The extra "Escape A" at the beginning of this string tells AppleWorks to print at six lines per inch.)

Next, you will enter the slashed zero code to the eight lines per inch area. Continue as follows:

10. With the Lines Per Inch Menu on the screen, select #2, "8 lines per inch".
11. Repeat step #8 and #9 above but enter Escape B as the first characters in place of Escape A.
12. Press Apple-Q and then the Escape Key to return to the Main Menu.

If you are like most Apple IIc owners, you probably use 5.25-inch disks with your system, so be prepared for some disk swapping during the process. Just follow the on-screen directions and insert the disk you used to launch AppleWorks when requested by the system.

AppleWorks will now print your documents with slashed zeros.]

The National AppleWorks Users Group (NAUG) is an association that supports AppleWorks users. NAUG provides technical support and information about AppleWorks and enhancements to that program. Our primary means of communicating with members is through the monthly newsletter entitled the **AppleWorks Forum**.

How to Configure the Standard Settings – Part 1

by Roy F. Barrows and Cynthia E. Field

This is the first of two articles that will help you configure AppleWorks 4 for your Apple II system. The authors assume that you know the purpose of TimeOut, Inits, and macros.

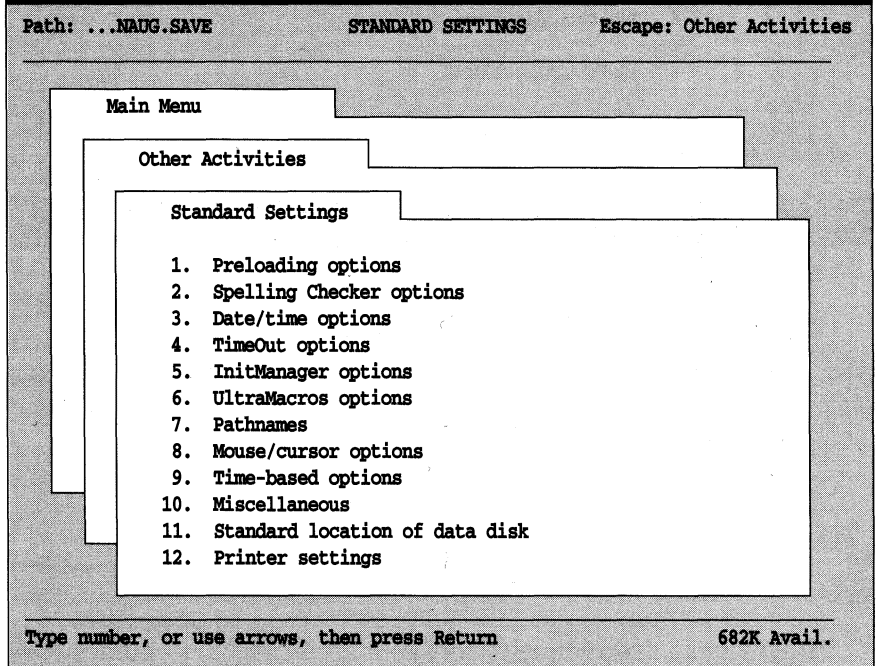
The advertising is no exaggeration: AppleWorks 4.0 is unquestionably the most significant upgrade ever released for AppleWorks. The latest version not only improves AppleWorks but also incorporates several previously extra-cost programs including AppleWorks Companion, TimeOut FileMaster, and other TimeOut applications.

AppleWorks 4 also includes InitManager, the TimeOut “engine”, and an UltraMacros “player”, all of which provide “hooks” that developers can use to produce new AppleWorks enhancements. [Ed: “Inits” are small programs that add functionality to AppleWorks.] However, because these features use disk space and memory, AppleWorks 4 ships with TimeOut, InitManager, and UltraMacros disabled. The default setup lets you use AppleWorks 4 on Apple II computers equipped with 128K of RAM and 5.25-inch floppy disk drives. Unfortunately, the default settings do not let you use all the new features built into AppleWorks. Users with more than 128K of RAM should follow the steps in this article to turn on these features.

Standard Settings Menu

You control these functions from AppleWorks’ Standard Settings Menu (see *Figure 1*); you can access the menu by pressing Apple-Q followed by Apple-S from anywhere within AppleWorks. Choices #4, 5,

Figure 1: AppleWorks 4 Standard Settings Menu



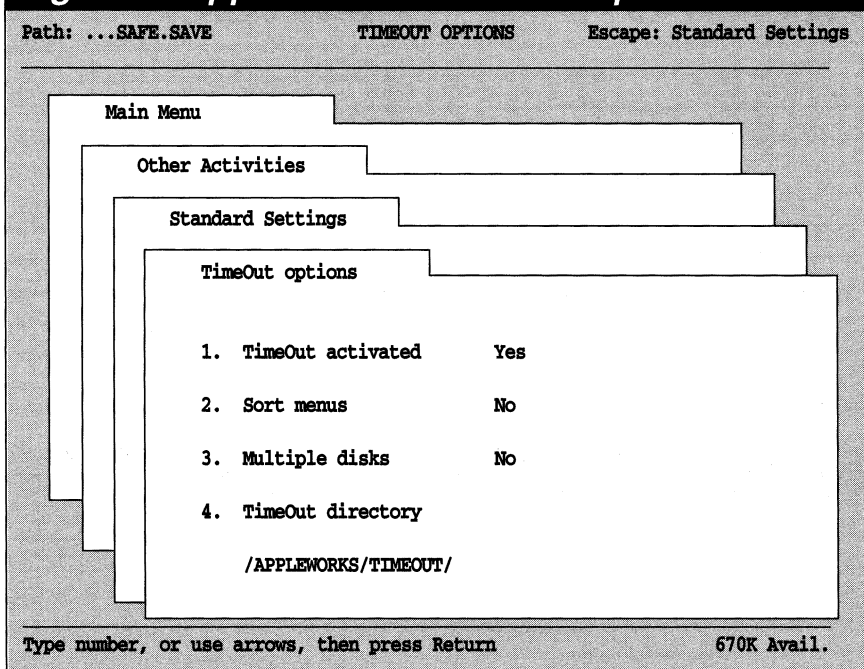
and 6 on the menu control TimeOut, InitManager, and UltraMacros, respectively. Because of the close relationship among these features, you should enable or disable the enhancements as a group.

TimeOut Options

Start by activating TimeOut. Follow these steps:

1. Press Apple-Q then Apple-S to access the Standard Settings Menu.
2. Select choice #4, “TimeOut options” to display the TimeOut Options Menu in *Figure 2*.
3. Press the Return Key to select choice #1, “TimeOut activated”. That turns on the TimeOut “engine”.

Figure 2: AppleWorks 4 TimeOut Options Menu



1. With the TimeOut Options Menu on your screen, select #4, "TimeOut directory" and press the Return Key.
2. If you store your TimeOut applications in the root directory of a floppy disk, select the drive you will use for the disk and press the Return Key.

If you store your TimeOut applications in a subdirectory, insert your TimeOut applications disk in a drive, highlight that drive on the menu, and press Apple-Return. Then select the subdirectory that stores your applications and press the Return Key. If you need to add another subdirectory to the path, press Apple-Return to access the next directory level. Repeat this step as many times as necessary to complete the path. Then press Apple-Q followed by the Escape Key to return to the Main Menu.

3. Quit and re-launch AppleWorks.

TimeOut Compatibility

Press Apple-Escape and AppleWorks will list all the TimeOut modules in your TimeOut Folder. The program

comes with eleven modules, including a screen blanker and paint program (see Figure 3). [Ed: Complete documentation for TimeOut Paint comes in an AppleWorks word processor file on the AppleWorks 4.02 Update Disk, which costs \$6 plus \$2 s/h from NAUG. The Update Disk requires a 3.5-inch disk drive.]

Several other AppleWorks 3.0 TimeOut applications, including ASCII Values, Notepad, and Puzzle, are compatible with AppleWorks 4. You should copy these modules to the TimeOut Folder and restart AppleWorks. [Ed: You can use the new file management utilities built into AppleWorks 4 to copy these files. Press Apple-Q followed by Apple-F to access the File Activities Menu.]

Figure 3: TimeOut Modules Provided with AW 4

Module	Module
TO.CONFIGDBLINK	TO.DUPLICATEZAP
TO.DATE.RESET	TO.INSTALL.DESK
TO.DB.LINK.4.43	TO.PAINT
TO.DB.WIDTHS	TO.SCREEN.BLANK
TO.DIFTODB	TO.UTILITIES
TO.DIFTOSS	

4. TimeOut can automatically sort your applications into alphabetical order. Turn on this feature by highlighting #2, "Sort menus" and pressing the Return Key.
5. If you boot from a floppy disk and need to swap disks to load all your TimeOut applications at startup, set choice #3, "Multiple disks", to "Yes". Otherwise, leave this setting at "No".

The last choice, "TimeOut directory", tells AppleWorks where you store your TimeOut applications. If you installed AppleWorks 4 on a hard disk, the installer automatically configures this option for your system. If you load your TimeOut applications from a floppy disk, enter the pathname to the applications here. Follow these steps to change the default pathname:

AppleWorks 4 Primer...

Next, you should use the Updater, a TimeOut application that comes with AppleWorks 4, to convert your other AppleWorks 3.0 TimeOut modules for AppleWorks 4. The “Converting Time-Out Modules” sidebar describes how to do the conversion.

Unfortunately, the Updater cannot convert all the applications. In addition, some of the new features of AppleWorks 4 make some TimeOut applications obsolete. (TimeOut FileMaster and TripleDesktop are noteworthy examples.) See page 26 of the January 1994 issue of the *AppleWorks Forum* for a list of compatible, convertible, currently incompatible, and obsolete TimeOut applications..

InitManager Options

Your next task is to activate the AppleWorks 4 InitManager. Follow these steps:

1. Press Apple-Q, Apple-S, and select choice #5 in the Standard Settings Menu. AppleWorks will display the InitManager Option Menu (see *Figure 4*).
2. Press the Return Key to activate the InitManager.
3. If you installed AppleWorks on a hard drive, the Installer automatically configures the “Init directory” setting for your system. If you use a floppy disk to launch AppleWorks, you might have to change this setting; use the method described under “TimeOut Options” to make the changes.
4. Now re-launch AppleWorks. A new screen appears that lists the inits that the InitManager loads on your system. All except one of the inits shipped with the program are “dot” commands used by UltraMacros and the macro-based TimeOut modules.

Figure 4: AW 4 InitManager Options Menu

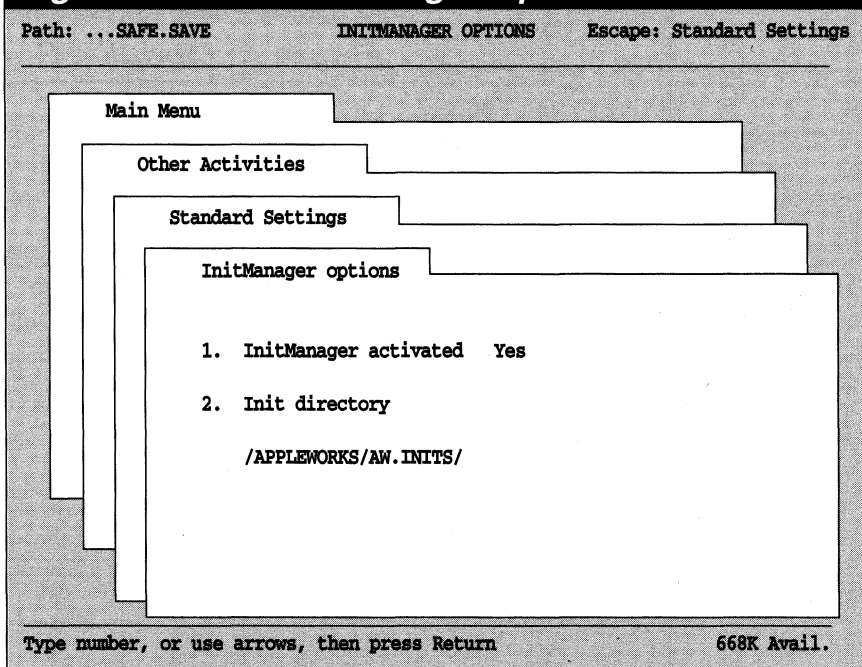
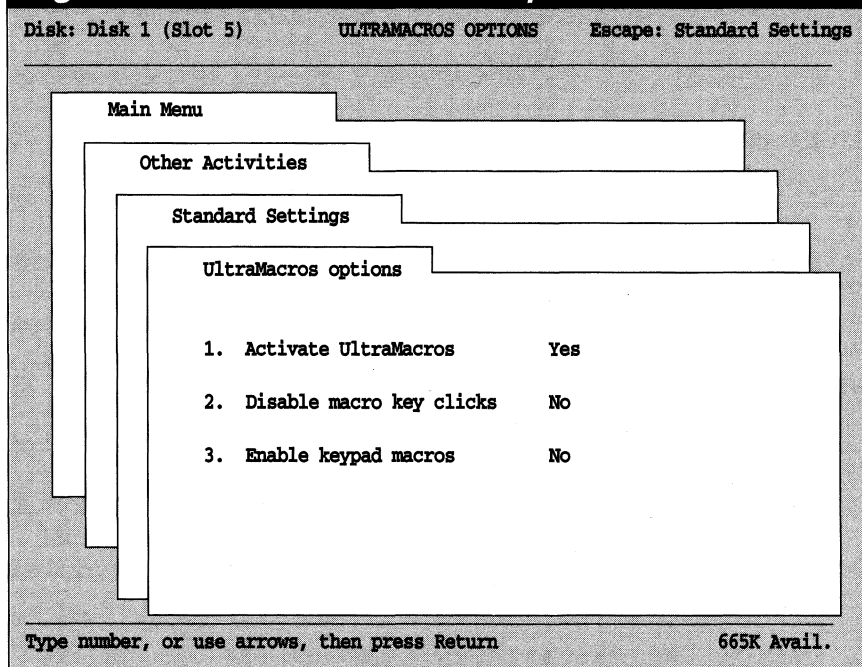


Figure 5: AW 4 UltraMacros Options Menu



UltraMacros Options

The UltraMacros Player included with AppleWorks 4.0 lets you run ready-made macros that come with the program or that you get from others. (You will need UltraMacros 4.3 if you want to create your own macros. UltraMacros 4.3 costs \$39.95 from Quality Computers. Owners of UltraMacros 2.x and 3.x can update to version 4.3 for \$24.95; own-

Converting TimeOut Modules

You need to “convert” the TimeOut modules in *Figure A* before they can work with AppleWorks 4. Follow these steps to convert the modules:

1. Follow the instructions in the accompanying article that describes how to activate TimeOut on your copy of AppleWorks.
2. Copy the following files from the “TO.UPDATER” folder on the “Samples” (/EXTRAS) disk to the /TIMEOUT folder on your AppleWorks 4.0 disk: DATA.1, DATA.2, DATA.3, DATA.4, DATA.5, DATA.6, DATA.7, TO.SCRIPT, and TO.UPDATER.

Figure A: Modules Converted by TO.UPDATER

<u>Module</u>	<u>Name</u>
TO.CALCULATOR 1.x	Calculator
TO.GRAMMAR 1.x	Grammar
TO.MEASURE 2.0	Measurements
TO.PAGE.PREVIEW 1.x	Page Preview
TO.SUPERFONTS 3.0	SuperFonts
TO.THESAURUS 2.0	Thesaurus
TO.UM.COMPIILER 2.2	UltraCompiler
TO.UM.OPTIONS 3.0	UltraOptions
TO.U4.M2M 1.1	UltraMac2Menu

3. Copy the TimeOut modules listed in the Figure A to the TimeOut Folder.
4. Reboot AppleWorks 4. This adds TO.UPDATER and the newly added modules to the TimeOut Menu.
5. Select “Updater” from the TimeOut Menu.
6. Follow the prompts to update your TimeOut modules.
7. Delete the files you copied in step #1.

ers of UltraMacros 4.1 can upgrade to UltraMacros 4.3 for \$12.95 directly from Quality. Owners of UltraMacros 4.2 can use the Updater program on the AppleWorks 4 disks to update to UltraMacros 4.3 at no charge.)

If you have at least 256K of RAM and an Apple IIGS, IIC, IIC-Plus, or an enhanced IIE, your next step is to turn on the UltraMacros Player. Continue as follows:

1. Press Apple-Q followed by Apple-S to display the Standard Settings Menu.
2. Select #6, “UltraMacros options” to display the UltraMacros Options Menu in *Figure 5*.
3. Press the Return Key to change “Activate UltraMacros” to “Yes”.
4. Set the second menu choice, “Disable macro key clicks”, as you wish. With this option set to “Yes”, AppleWorks will not make the clicking sound that reminds you when a macro has control of your system.
5. The “Enable keypad macros” choice is for

Apple IIGS users and determines whether the numeric keypad types numbers or launches macros. If you set this option to “Yes”, pressing a numeric keypad key will execute any Apple-Option macro assigned to that key. With the option set to “No”, the keypad lets you make numeric menu choices and type numbers into a document. You cannot have it both ways. The numeric keypad either launches macros or types numbers.

6. Return to the Main Menu, quit AppleWorks, and re-launch the program. AppleWorks will ask for your name and address; it will use that information when you press Solid-Apple-N (which types your name) or Solid-Apple-B (which types a memo-format letterhead). [Ed: *The Apple IIGS keyboard does not provide a Solid-Apple Key; Apple IIGS owners press the Option Key whenever AppleWorks calls for a Solid-Apple keypress.*]

Conclusion

That completes the steps necessary to turn on TimeOut, InitManager, and UltraMacros.

AppleWorks 4 Primer...

Although AppleWorks 4 preserves the familiar interface of the previous versions of AppleWorks, it is a far more sophisticated product. You did not become a knowledgeable AppleWorks user overnight, and it will take time and patience for you to become comfortable with the enhanced potential of AppleWorks 4.

In this article you learned how to configure some of the program's more powerful features, notably its TimeOut, InitManager, and UltraMacros capabilities. Next month we will describe how to set up the other new options in AppleWorks 4's Standard Settings Menu.

[Roy Barrows is a writer and developer of macro-based enhancements for AppleWorks.]

[Dr. Cynthia E. Field has been writing about Apple II computers since 1982 and is the Contributing Editor for the AppleWorks Forum.]

NAUG BBS

Congratulations to David Roemer of Brooklyn, New York, the 90,000th caller to the Electronic Forum, NAUG's AppleWorks Bulletin Board. Mr. Roemer won a one-year extension to his NAUG membership. Call the Electronic Forum for help with AppleWorks or to download templates, fonts, or utility programs. A free service of NAUG. (615) 359-8238.

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Public Domain Update

New Disks in the NAUG Library

Small Business Accounting

Owners of small single-proprietor and partnership businesses will appreciate NAUG's new Small Business Accounting Disk. This disk includes eight spreadsheet templates that you can use to maintain a general ledger, general journal, and payroll journal, and produce depreciation schedules, financial statements, and earnings reports. The disk includes six pages of documentation to help you use the templates, but you will need some understanding of business accounting to use these templates to maintain your business records.

The Small Business Accounting Disk is shareware; you send the author, Michael Harris, \$10 after you get the disk from NAUG.

Medical Spelling Dictionary

NAUG's new Medical Spelling Dictionary Disk contains six text files with more than 65,000 correctly spelled medical terms. Here is the data you need to create the ultimate medical spelling dictionaries for AppleWorks 3.0, AppleWorks 4, or TimeOut QuickSpell. You need at least a 1500K AppleWorks desktop and must know how to create word processor or data base files from text files to use this disk. 3.5-inch disk only; \$6 plus \$2/s/h per order.

How to Get Disks

Unless otherwise noted, all disks are available in both 5.25-inch (\$4) and 3.5-inch (\$6) format, plus \$2/s/h per order. Order from: Public Domain Library, NAUG, Box 87453, Canton, Michigan 48187; (313) 454-1115; Fax: (313) 454-1965. NAUG accepts Visa and MasterCard.

All NAUG disks (except system disks provided by Apple Computer) are also available for downloading from NAUG's electronic bulletin board (the Electronic Forum), and from the NAUG areas on CompuServe, America Online, and GENIE.

How to Create Attractive Note Pads

by Cynthia E. Field

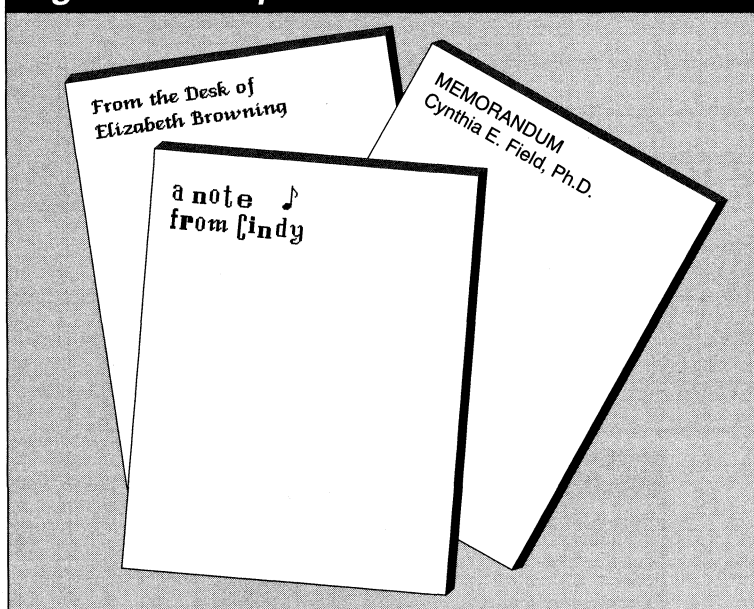
This is the first in a series of articles that describe creative projects you can produce with AppleWorks 2.0 or later and TimeOut SuperFonts. This month you will develop a template that lets you preview picture fonts. Then you will learn how to use this template to produce formal and informal note pads. The author assumes that you know how to use the AppleWorks word processor and that you already installed SuperFonts.

Some people think you need a Macintosh or a SPC to enjoy desktop publishing, but AppleWorks users know better. For a decade AppleWorks has provided the tools we need to design seating charts, party invitations, wall calendars, personal organizers, and even professional quality project planners. [Ed: These are only some of the templates that appeared in the **AppleWorks Forum**.]

Although clever layouts and bold or underline text are eye appealing, it is hard to produce creative, unique documents using the fonts built into your dot matrix printer. But experienced AppleWorks users know that TimeOut SuperFonts, a popular enhancement to AppleWorks, increases your design options exponentially. SuperFonts lets you use any of hundreds of so-called "GS fonts" in your word processor creations. And you will quickly find that typefaces such as Helvetica, New York, or San Francisco will brighten your otherwise dull-looking documents. [Ed: GS fonts were originally developed to work with 16-bit programs like AppleWorks GS. Those programs use the graphics capability built into Apple IIgs computers.]

Surprisingly, a laser printer is neither required nor desired for your SuperFonts projects. In fact, the ImageWriter II is the printer of choice for the activities we will share in the coming months as you, your friends, children, and students learn how to

Figure 1: Sample Note Pads



create useful and attractive items like the note pads shown in *Figure 1*.

Managing Your Font Library

SuperFonts comes with 15 typefaces including text faces such as Chicago and Times, fancy "headline" typefaces such as Venice and San Francisco, and "picture" typefaces such as Cairo and Mobile (see *Figure 2*). You will use these fonts for the projects in this series.

Most typefaces come in several sizes; the file name includes the name and size of the font. For example, the "18" in "Helvetica.18" refers to that font's

Figure 2: Some SuperFonts Typefaces




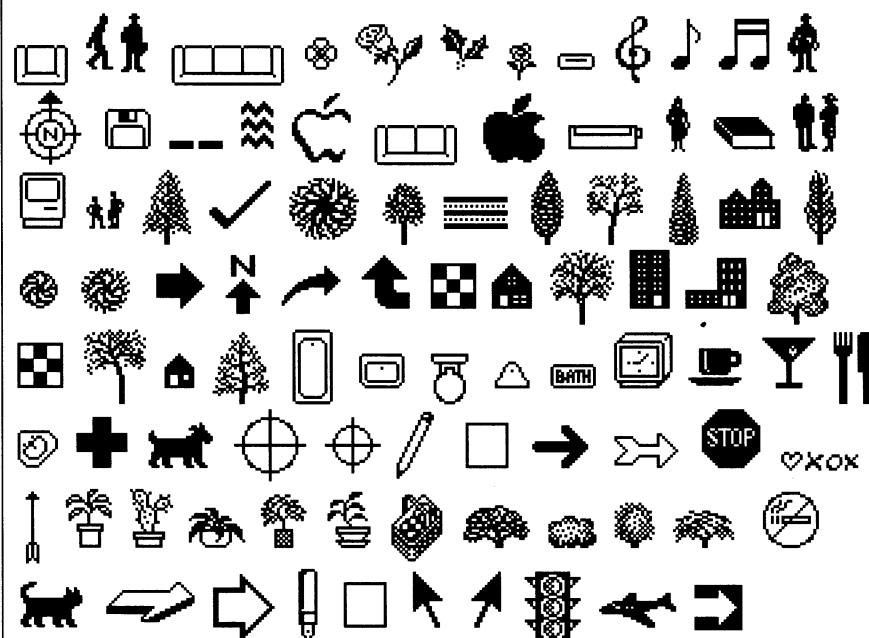
Cairo.18 -  Cairo.18 - 
Chicago.18 - **abcdefghijklmnopqrst**
Courier.18 - abcdefghijklmnopqrstu
Helvetica.18 - abcdefghijklmnopqrstuvwx
London.18 - abcdefghijklmnopqrstuvw
Mobile.18 - 
SanFrancisco.18 - **abcdefghijklmnopq**
Symbol.18 - αβχδεϕγηιφκλμνοπθρστυω
Times.18 - abcdefghijklmnopqrstuvwxyz
Venice.14 - abcdefghijklmnopqrstuvwxyzA

Figure 3: Pictures from the Mobile Font



point size. (A “point” is a printer’s unit of measurement; there are 72 points to an inch. Thus, a capital letter in an 18-point font will be approximately $18/72$ of an inch (or about a quarter-inch) high.) You will use three different 18-point fonts to personalize the note pads you will create this month.

You can supplement your SuperFonts collection with any of the standard GS fonts of all sizes and

descriptions that are available through public domain libraries such as NAUG's. The availability of diverse typefaces lets you exercise even more creativity in your personal adaptations of the projects we will do in the months ahead. *[Ed: NAUG offers 43 different disks filled with GS fonts that work with SuperFonts. Each disk includes at least a dozen fonts and costs \$4 (5.25-inch) or \$6 (3.5-inch) plus \$2 s/h per order. For a list, send a self-addressed, stamped, business-size envelope to "Apple IIGS Fonts", NAUG, Box 87453, Canton, Michigan 48187.]*

Working with Picture Fonts

Whether or not you decide to buy additional fonts, you need to be able to see what a font looks like before you use it in your documents. Although it is important to select the right text font for a project, previewing a font is especially crucial when you are working with picture fonts.

In lieu of letters, numbers, and punctuation marks, picture fonts contain small pictures or “icons”. For example, Mobile.18, shown in *Figure 3*, is one of the two picture fonts included in the SuperFonts package. The font includes a variety of plants and trees, home furnishings, and people, not to mention the famous Apple logo.

Each picture is a “character” that you can generate from the keyboard.

But because ProDOS is not a graphic-based system, you cannot easily display these pictures on the screen. Nor do they appear on the face of the keys on your keyboard. To see the pictures, you must “print” your document, either on the screen (which will mimic the printed page) or directly on paper. *[Ed: NAUG members can get a printout of every font in the NAUG library. This is a valuable docu-*

Figure 4: Font Preview Template in Progress

```
File: FONT.PREVIEW          REVIEW/ADD/CHANGE          Escape: Main Menu
=====
!@#%&^&*()_+
1234567890-=

QWERTYUIOP{}
qwertyuiop[]

ASDFGHJKL:"
asdfghjkl;'

ZXCVBNM<>?
zxcvbnm,./

~|
`\'

-----
Type entry or use ⌘ commands          Line 1 Column 1          112K Avail
```

ment for anyone who uses TimeOut SuperFonts, PublishIt!, or 16-bit applications such as AppleWorks GS. The 88-page printout costs \$24 including postage from John Sambataro, Box 290788, Fort Lauderdale, Florida 33329. Include a check with your order. Add \$5 for shipping outside the United States.]

Needless to say, using a picture font can be tricky because you have to determine which keys produce the pictures you want. (For instance, typing the letter “t” prints the solid-Apple logo in the Mobile.18 font.) Remembering the relationship between the keys and characters can be an impossible task.

So you will begin by using SuperFonts to create a FONT.PREVIEW template that will depict the relationship between any font’s character set and the corresponding keystrokes. You can use this template when you use picture fonts like Mobile and “symbol fonts” that include mathematical, American Sign Language, or other unusual characters.

Creating the FONT.PREVIEW Template

You will begin by typing every possible symbol, number, punctuation mark, and letter on the Apple II keyboard into an AppleWorks word processor document. You will proceed from left to right, row by row, typing upper-case characters first and

lower-case characters second. [Ed: In a future article the author will describe how to generate even more characters by using the extended character sets built-into many fonts.]

Follow these steps:

1. Add a new word processor file to the desktop and name it “FONT.PREVIEW”.
2. Press the Return Key once to move the cursor to Line 2 Column 1. AppleWorks displays the cursor location at the bottom of the screen. You will need to keep track of the cursor location for many of the desktop publishing projects we will describe in the coming months.
3. Press the Shift Key (not the Caps Lock Key) and the first key in the top row. This puts an exclamation mark on the screen.
4. Press the Shift Key and the second key in the top row. An “@” sign will appear on the screen.
5. Type the upper case equivalent for every key in the top row except the Escape Key and Delete Key. Press the Return Key when you are finished typing the row. [Ed: Ignore the keys on the numeric keypad if your Apple II has one.]
6. Now press the same keys in the top row, but do not use the Shift Key. Press the Return Key twice when you are finished typing the lower case characters in the top row.
7. Repeat steps #5 and #6 for each of the remaining four rows on the computer keyboard. Ignore command and special function keys.

When you are done, your template will look like the example in Figure 4. Now continue with these steps:

8. Press Apple-Z to display the Return character at the end of each line. Then use Apple-C to copy each pair of lines “Within document” to the empty line beneath the pair. Do not copy the Return at the end of the second line of the selected text.

SuperFonts Projects...

Each pair of lines contains the upper case and lower case characters for each row on the keyboard. When you are finished copying all five pairs of lines, your screen will look like *Figure 5* (which contains two consecutive pairs of upper case and lower case characters for each keyboard row).

9. Press Apple-1 to move the cursor to the top of the document.
10. Save your template. Then use TimeOut FileMaster or Apple-Works 4's file management utilities to lock the file. That will keep you from inadvertently over-writing the template.

Using FONT.PREVIEW

Now you will use the template to create a printout that shows the character set built into the Mobile.18 font. Follow these steps:

1. Use Apple-N and Apple-Y to change the name of the template to "FONT.MOBILE".
2. With the cursor at Line 1 Column 1, type `<1=Mobile.18>` and press the Return Key.
3. On the second line, type `<2=Geneva.18>`.

The two lines you just typed are SuperFonts "Load Font" commands that tell SuperFonts which font to use after it encounters a '`<1>`' or '`<2>`' "Change Font" command in the document.

Next, you will enter the appropriate SuperFonts Change Font commands so that each row of keyboard characters prints first as Mobile.18 pictures, with all upper case and lower case possibilities included. Then the template will print the corresponding keyboard characters in the Geneva font. Continue this way to enter the Change Font commands:

4. Put the insert cursor under the first character ("!") in Line 3. Type `<1>`. This command tells SuperFonts to start printing in the Mobile.18 font. SuperFonts will now print in Mobile.18 until it encounters another Change Font command.

Figure 5: Completed Font Preview Template

```
File: FONT.PREVIEW          REVIEW/ADD/CHANGE          Escape: Main Menu
=====
!@#%&*()_+
1234567890-=
!@#%&*()_+
1234567890-=

QWERTYUIOP{}
qwertyuiop[]
QWERTYUIOP{}
qwertyuiop[]

ASDFGHJKL:"
asdfghjkl;'
ASDFGHJKL:"
asdfghjkl;'



ZXCVBNM<>?
zxcvbnm,./
ZXCVBNM<>?
zxcvbnm,./


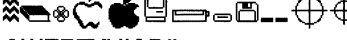
-----
Type entry or use ⌘ commands          Line 1 Column 1          112K Avail
```



5. Move the cursor down two lines to the "!" character and type `<2>`. This changes the font to Geneva.18.
6. Repeat steps #4 and #5 for each of the remaining keyboard rows. For instance, you will type `<1>` at the beginning of the first "Q..." row, the first "A..." row, the first "Z..." row, and the first "~..." row. You will type `<2>` at the beginning of the second "Q...", "A...", and "Z..." rows. [Ed: You can speed up this process by copying the Change Font command to the clipboard and copying from the clipboard in the appropriate locations.]



Next, you will set small top and bottom margins so the printout will fit on a single piece of paper. SuperFonts' Load Font commands must precede everything else in the document, so you must follow these steps carefully to set the margins:


7. Move the cursor to line three of the document as indicated by the line counter at the bottom of the screen.
8. Press Apple-O to access the Printer Options Menu and set the top and bottom margins to "0.5". Then press the Escape Key. These margin will let you print the character set for any 18-point font on a standard sheet of paper. Larg-



 !@#\$%^&*()_+
 1234567890=-



 QWERTYUIOP{}
 qwertyuiop[]



 ASDFGHJKL;'
 asdfghjkl;'



 ZXCVBNM<>?
 zxcvbnm,./


 ~|
 `\'

9. Save the file.

- Now you will print the Mobile.18 character set and the keystroke that generates each “character”. Follow these steps:

- The printout should look like the example in *Figure 6*. Note how the first pair of lines in each set in the template prints as pictures from the Mobile.18 font. Immediately underneath each group of pic-

The template makes it easy to scan the printout to find a picture you might want to use in a SuperFonts project. It also lets you determine which key to press to create the picture.

Creating Formal Note Pads

Now you will learn how to use SuperFonts to create personalized note pads. First you will create the “Memorandum” note pad in *Figure 1*. Then you will use the Mobile.18 picture font and lively San Francisco headline font to produce the graphic in the informal note pads in that figure. *[Ed: Future SuperFonts pro-*

You will start by laying out a page that accommodates four pieces of note paper that you can cut to produce four notes per sheet (see *Figure 7*). Follow these steps:

- Page 12

(Pressing the Return Key is essential because the Load Font command must precede the Printer Options you will insert next.) Only one Load Font command appears in this document, so all text will print using the Helvetica.18 font.

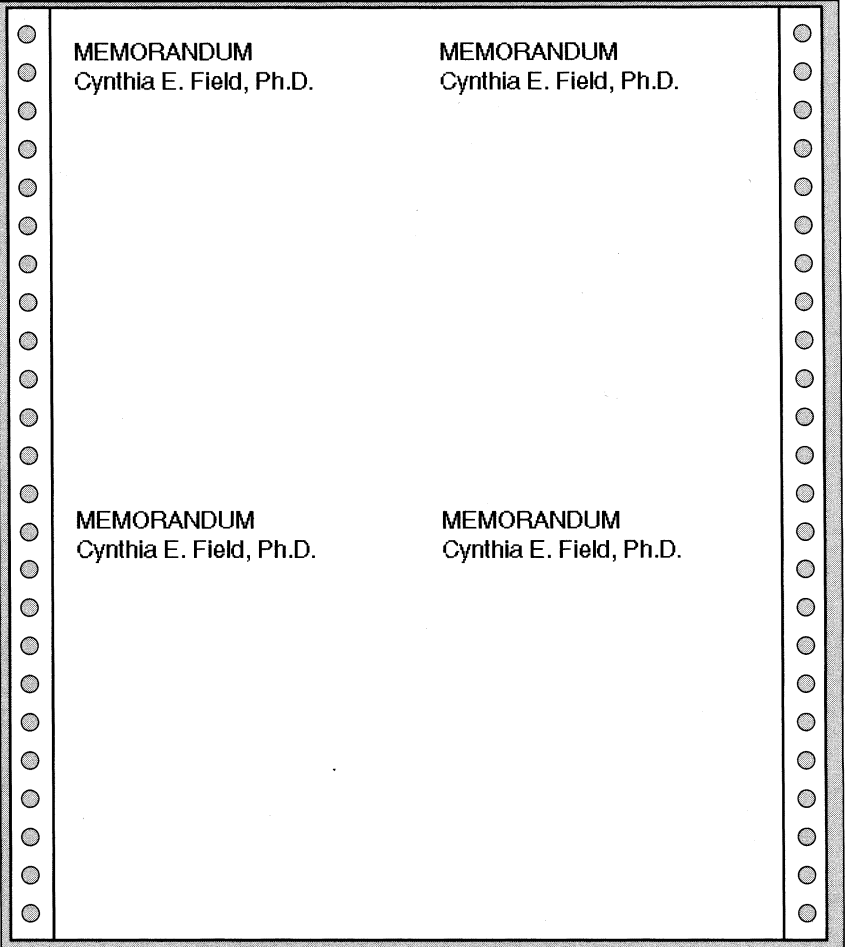
5. Press Apple-O and set both the left and top margins to 0.5-inches. Then press the Escape Key.
6. With the cursor on Line 4 Column 1, type <1>MEMORANDUM.
7. Press the Tab Key, type MEMORANDUM, and press the Return Key.
8. On Line 5 type your name, press the Tab Key, and type your name again. That completes the text for the first and second pieces of note paper on the page.
9. Use Apple-C to copy lines 4 and 5 "To clipboard". Press the Return Key to move the cursor to line 26. Then use Apple-C to copy "From clipboard". That creates the text for the third and fourth pieces of note paper on the page.
10. Save the file.
11. Press Apple-Escape and print one copy of the page using SuperFonts' high quality mode. The printout should look like the example in Figure 7.
12. Use a paper cutter to cut the 8.5-inch wide page into two 4.25-inch wide strips. Put the second strip of paper under the first and cut the two 11-inch pieces horizontally at the 5.5-inch mark.

You will now have four pieces of note paper. The "registration" should be almost perfect. That is, when you sandwich two or more of the note papers together and hold them up to the light, the text should line up properly.

Mixing Text and Picture Fonts

Not all occasions call for a serious formal note. Follow these steps to create an informal design that

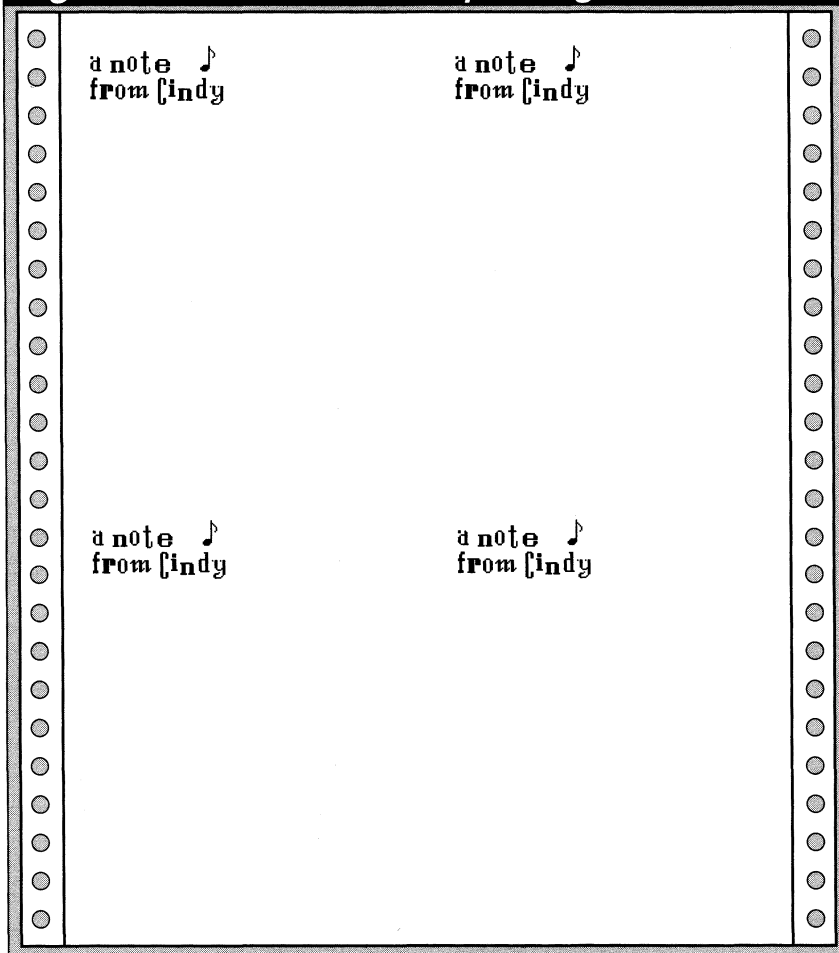
Figure 7: Formal Note Paper Page



uses a text font and a picture font to produce the informal note pad in Figure 1:

1. Open a new word processor document and name it "NOTE.INFORMAL".
2. Press Apple-T, select "Modify current", and press "N" for "No tabs".
3. Create a Right Tab in column 12, a Left Tab in column 43, and a Right Tab in column 54. Then press the Escape Key.
4. At Line 1 Column 1, type <1>Sanfrancisco.18> and press the Return Key.
5. On the second line, type <2>Mobile.18> and press the Return Key.
6. Press Apple-O and set the left and top margins to 0.5-inches. Then press the Escape Key.
7. With the cursor on Line 5 Column 1, type <1>a note. This tells SuperFonts to print the words "a note" using the SanFrancisco.18 font.

Figure 8: Informal Note Paper Page



8. Press the Tab Key, type `<2>k` and press the Tab Key again. As you can see from Figure 6, pressing the letter “k” generates a musical eighth note. Thus, the command `<2>k` tells SuperFonts to print the musical eighth note from the Mobile.18 font.
9. Type `<1>a note`, press the Tab Key, and type `<2>k`. Press the Return Key.
10. At Line 6 Column 1 type `<1> from cindy`, press the Tab Key and type `from cindy` again, in each case substituting your first name or nickname for “Cindy”. This creates the first and second pieces of note paper on the page.
11. Use Apple-C to copy lines 5 and 6 “To clipboard”. Move the cursor to line 22 and copy “From clipboard”. These steps create the third and fourth pieces of note paper on the page.

The line number to which you copy the note paper layout in step #11 will vary from template to tem-

plate. Some of the variables affecting the destination line include the number of Load Font commands and Printer Options at the top of the page and the size and style of the fonts you use. The first and second notes will usually print correctly one-half inch from the top and one-half inch in from the left-hand edge of the note. Determining the exact line location for the third and fourth notes on the page will take some experimentation.

Later you can modify your designs and experiment with different text and picture fonts. For now, continue with these steps to save and print the NOTE.INFORMAL note pad design:

12. Save the file.
13. Press Apple-Escape and print one copy of the page using SuperFonts’ high quality mode.
14. Make a vertical cut at the 4.25-inch mark along the top edge of the page. Put the second strip of paper under the first and cut the two pieces horizontally at the 5.5-inch mark.

Duplicating Your Note Paper

Now print a fresh copy of each page of note pads and take the uncut printout to a local quick print shop. The cost of duplicating the design will depend on the quantity of notes you want. At my local print shop, each sheet of four notes costs six cents to photocopy. That’s one-and-a-half cents per note. Using offset printing to print 1000 sheets (4000 notes) costs only \$32, or less than a penny per note. Many print shops will let you choose white or pastel paper for the same price. Color paper is an especially attractive option for your home-grown note pads.

The quick print shop will also cut the note paper for you, creating a more professional look than you can get using an office or school paper cutter. Expect to pay about \$3 per 500 sheets (2000 notes) for cutting.

You can arrange a stack of note paper in a decorative tray, but note pads are more convenient. The

quick printer will pad the notes for you for about 15 cents per pad. Or you can pad them yourself. It is easy, inexpensive, and fun.

You will need cardboard backing, padding compound, a foam brush, and some heavy books. You can buy the cardboard from a local stationery supplier, but one Apple II user I know recycles the cardboard from empty cereal boxes for her note pads. You can buy foam brushes at any hardware or paint store. And you probably already have the heavy books.

Padding compound is the one ingredient you will have to shop for. It is a thick, nontoxic, liquid adhesive product that you paint on the top edge of each note pad. Red is the customary color, although you can find a colorless variety as well. You may be able to buy a small quantity of padding compound from your quick print shop. You can also buy padding compound from the Fidelity Graphics Arts Catalog. [Item #BK33176, 1 qt. Padding Compound and 5 Brushes, \$29.95. Fidelity Products Co., Box 155, Minneapolis, Minnesota 55440; (800) 328-3034; (612) 536-6500; Fax (800) 842-2725.] Be warned: A quart is a lot of padding compound!

How to Make the Pads

Making pads to use yourself, to give as gifts, or to raise funds for school is easy. Just follow these steps:

1. Count out 25 pieces of note paper and use one cardboard backing per pad.
2. Put a piece of newspaper down to protect your desk. Then stack the pads neatly and put books on top of them to compress and flatten the pads.

You can safely stack two columns of a half dozen pads each under some books without fear of the tower toppling over. Make sure everything is aligned properly before you put the books on top of the pile. If you are handy with tools and wood, you can make a jig that aligns and compresses the pads. Professional pad presses are also available.

3. Use the foam brush to paint a thin but continuous coat of padding compound along one edge of the stacked pads. Rinse the brush with water

and squeeze out excess moisture so you can reuse the brush for the next coat.

4. Allow sufficient time for the padding compound to dry. An hour in a warm room should be adequate.
5. Repeat steps #3 and #4 as often as necessary to completely secure the pad's pages and cardboard. I find that several thin coats are better than one or two thick ones. Let the last coat dry overnight.
6. Remove the books when the padding compound is complete dry. Then gently separate the pads. If they do not separate easily, use a utility knife to slice the padding compound between the cardboard bottom of one pad and the first note of the next pad.

Conclusion

This month you created a template that prints the character set of a picture font so you can choose the illustrations you want to use in your SuperFonts projects. You also designed formal and informal note pad templates and used SuperFonts to produce note paper. Finally, you learned how to use padding compound to make note pads for personal, gift-giving, or fund-raising purposes.

[Dr. Cynthia E. Field has been doing things that can't be done on Apple II computers since 1982. She was the author of inCider/A+'s popular "Press Room" column. She is the Contributing Editor of the AppleWorks Forum.]

[Ed: Members interested in producing note pads and adding picture fonts to their library should order this month's issue of NAUG on Disk which includes a working copy of this month's FONT.PREVIEW template, the formal and informal note pad templates, and the nine most popular picture fonts in the NAUG Library. The templates require AppleWorks 2.0 or later enhanced with TimeOut SuperFonts. NAUG on Disk requires a 3.5-inch disk drive and costs \$10 directly from NAUG.]

Lowest Prices Ever for AppleWorks Books

NAUG members can now get the lowest prices ever offered on the following popular AppleWorks books:

AppleWorks Handbook – Vol. One: More than 50 articles that answer the most commonly asked questions and solve the most frequent problems with AppleWorks. 212 pages. List: \$19.95. Closeout: \$5.

AppleWorks Handbook – Vol. Two: The 200 best “How to...” articles ever published for AppleWorks. A must for every AppleWorks user’s library. 492 pages. List: \$27.95. Closeout: \$5.

Apple II Hard Disk Primer: NAUG’s step-by-step Hard Disk Primer teaches you how to select, install, configure, and use a hard disk system with AppleWorks, AppleWorks GS, desktop publishing programs, and all other popular Apple II applications. By Dr. Gary Morrison. 136 pages. List: \$19.95. Closeout: \$5.

UltraMacros Primer: Teaches everything you need to know about UltraMacros 2.x and 3.x. The book is clearly illustrated with dozens of useful sample macros to help you get started. The most popular UltraMacros resource ever published. Not compatible with AppleWorks 4. By Mark Munz. 248 pages. List: \$19.95. Closeout: \$5.

Apple II Guide – Vol. One: This is the first volume of Apple Computer’s guide for Apple II owners. Includes valuable technical articles about networking, data exchange, troubleshooting, GS/OS, and an overview of popular Apple II applications. 240 pages. List: \$19.95. Closeout: \$3.

Apple II Guide – Vol. Two: An important collection of 25 articles that describe the history of the Apple II and provide tips to help you get more from your Apple, information about telecommunications and interactive media, and technical data about the hardware and operating system. 205-pages. List: \$19.95. Closeout: \$3.

AppleWorks Printer Wall Charts: Here is a special closeout price on NAUG’s popular 2-color, poster-size, wall charts. The charts contain the information you need to use more than 100 different printers with AppleWorks. List: \$7.95. Closeout: \$1.

Shipping

Books – \$3.50 for the first book and \$2 for each additional book. Wall Charts – \$2 if ordered alone; free if ordered with any book. Prices are in U.S. Dollars; international shipping additional.

Quantities are limited; order early to ensure that we can fill your order. All orders filled on a first come, first served basis. Credit card orders only. Telephone and fax orders recommended at these special closeout prices.

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Help Your Fellow NAUG Members

NAUG is updating its Members Helping Members directory to reflect your responses to the Members Helping Members form that appeared in the March 1994 issue of the *AppleWorks Forum*. As a part of this process, we must purge the list of volunteers who do not update their data.

As a Members Helping Members volunteer, you provide a valuable service for the AppleWorks community. If you can serve as a volunteer, please submit the form included in the March 1994 issue of the *AppleWorks Forum*.

An AppleWorks 4 Checking Account Manager

Stan Hecker

This month's article describes how to create a checkbook management data base that uses several new AppleWorks 4 data base features, including glossaries and the @PriorRec function. The author assumes that you know how to create and manipulate AppleWorks data base files.

Developers of checkbook templates have long debated whether they should use AppleWorks' data base or spreadsheet modules to construct their templates. Advocates of the data base point to the easy data entry and powerful reporting capabilities of AppleWorks' data base module. Proponents of spreadsheet templates applaud the spreadsheet's mathematical capabilities.

AppleWorks 4's enhanced data base calculating power tilts the scale in favor of using the data base for your checkbook templates.

Overview

The checking account manager you will create this month will use this new power to track income and expenses, calculate a running balance, and reconcile the account with your monthly bank statement. Your template will include a checking account data base, a "glossary" data base that you will link to your checking account data base, and three data base reports.

Each Single Record Layout screen in your data base will contain data for a single transaction. The transaction can be a deposit, a check, an ATM (automatic teller machine) withdrawal, a bank service charge, or any other kind of debit or credit. *Figure 1* shows a data base record for a check written to pay an electric bill.

Figure 1: Sample Checkbook Transaction

```
File: CHECKING.1994          REVIEW/ADD/CHANGE          Escape: Main Menu

Selection: All records

Record 7 of 30  (30 selected)
=====
DATE (mm/dd/yy): Jan 17 1994

DEPOSIT (D): -      CHECK #: 871
                   PAYEE: Electric Company
                   AMOUNT:   $97.44

                   BUDGET CATEGORY: Utilities

BALANCE:           $2,322.04

                                CLEARED (X): -
                                BANK STATEMENT BAL.: $3,290.32

-----
Type entry or use ⌘ commands                                02/18/94  9:14
```

The template includes a BUDGET CATEGORY field where you will enter a user-defined category to help you track expenditures for clothing, groceries, utilities, and your income tax-related transactions. You will also create a BUDGET.GLOSS (glossary) data base that will contain budget account names and categories. The glossary list will pop up automatically when you enter data in the BUDGET CATEGORY field. *Figure 2* shows part of the pop-up glossary.

You will also create three data base reports: CHECK REGISTER, BUDGET EXPENDITURES, and UNCLEARED ITEMS. The CHECK

My Favorite Template...

Figure 2: Pop-Up Glossary w/ Budget Accounts

File: CHECKING.1994 GLOSSARY Escape: Review/Add/Change

Selection: All records

Record 11 of 30 (30 selected)

DATE (mm/dd/yy): Jan 24 1994

DEPOSIT (D): - CHECK #: 885
 PAYEE: Automobile Club
 AMOUNT: \$60.00

BUDGET CATEGORY: CAR

BALANCE: \$1,066.40

CLEARED (X):
 BANK STATEMEN

Accessories
 AIRline Tickets
 BANK Fees
 BUS--Inter-city
 BUS--Intra-city
 BUSIness Expense
 CAR--Auto Maintenance
 CAR--Club Membership
 CAR--Loan
 CAR--Vacation
 CLOthing
 DONation
 ENTertainment
 FOOD
 FURniture

Use arrows to select, then press Return 02/18/94 9:24

Figure 3: Check Register Report

File: CHECKING.1994
 Report: CHECK REGISTER Page 1
 DATE (mm/dd/yy) DEPOSIT (D) CHECK # PAYEE AMOUNT BALANCE BUDGET CATEGORY 3/7/94
 CL

Jan 1 1994	D		STARTING BALANCE	\$3,290.32	\$3,290.32		X
Jan 3 1994		850	American Express	\$600.00	\$2,690.32	Vacation	
Jan 4 1994		861	MasterCard	\$261.95	\$2,428.37	Clothing	
Jan 6 1994		862	Postmaster	\$6.00	\$2,422.37	Personal Expense	
Jan 15 1994		879	Record Club	\$2.89	\$2,419.48	Hobbies & Entertainment	
Jan 17 1994		873	My Favorite Bank	\$1,000.00	\$1,419.48	Housing	
Jan 17 1994		869	Electric Company	\$97.44	\$1,322.04	Utilities	
Jan 20 1994		881	MasterCard	\$90.03	\$1,232.01	Clothing	
Jan 21 1994		883	Ye Olde Gift Shoppe	\$70.76	\$1,161.25	Gifts	
Jan 21 1994		884	The Book Store	\$34.85	\$1,126.40	Hobbies & Entertainment	
Jan 24 1994		888	Automobile Club	\$60.00	\$1,066.40	Automobile Expense	
Jan 28 1994		889	HP Engineering	\$86.97	\$979.43	Automobile Expense	
Jan 30 1994		890	Resource Center	\$10.00	\$969.43	Charitable Donations	

REGISTER (see Figure 3) is a lot like the paper register you already use. The BUDGET EXPENDITURES report (see Figure 4) totals the amount of money you spent on items in each category of your budget. The UNCLEARED ITEMS report (see Figure 5) lists all uncleared deposits and checks.

Creating the CHECKING.TEMPL4 Data Base

You will start by creating the checking account template. Follow these steps:

1. Launch AppleWorks 4 and create a new data base file called CHECKING.TEMPL4. Save the file frequently as you work. If you have a hard disk drive, activate AppleWorks 4's Auto-save feature; it will automatically save the file at a time interval that you specify. Using Auto-save with a floppy drive can test your patience, but it is a joy to use with a hard drive. [Ed: Auto-save is one of the "Time based options" listed in the Standard Settings Menu. You need an Apple IIGS or a ProDOS clock-equipped Apple IIe, IIc, or IIc Plus to use this feature.]
2. Create the nine categories shown in Figure 6. When you are finished, press the Escape Key to go to Multiple Record Layout.
3. With the cursor in the DATE (mm/dd/yy) category, use Apple-L to "Change the existing record layout". Then use Apple-Right Arrow and Apple-Left Arrow to change the width of each category to match the width shown in Figure 6. (Note that AppleWorks 4 displays the column width above each category name.)

The expanded layout will display the complete category labels and the contents of each category. It also makes it easier to create some of the reports described later in this article. (If you prefer to enter checkbook data in Multiple Record Layout, you can narrow the columns to display as many categories as possible without scrolling horizontally. But, for now, we suggest that you re-size the columns to match the values in Figure 6.) Then proceed with these steps:

4. Press the Escape Key and choose "Down (standard)".
5. Press Apple-Z to switch to Single Record Layout.

My Favorite Template...

- Press Apple-L and change the layout so the category locations match the coordinates in Figure 6. The coordinates appear in the upper right-hand corner of the Change Record Layout screen. [Ed: The process is easier if you start with the last (BANK STATEMENT BAL.) category and move up the list of categories.]

This layout clusters most of the check-book categories in the upper part of the screen. The category that will display the running balance is in the bottom-left of the screen. The categories CLEARED (X) and BANK STATEMENT BAL., which will help you reconcile your account with the bank statement, are at the bottom of the screen.

- When you are done, your screen should look like the example in Figure 1. Press the Escape Key and select "Left to Right, Top to Bottom".

Formatting Categories

Next, you will use AppleWorks 4's formatting options to customize some of the data base categories. Follow these steps:

- Put the cursor in the DEPOSIT (D) category and press Apple-O to access the Options Menu.
- Choose "Modify rules".
- Choose "Text only" and set "Case" to "Upper case".
- Set "Min/max length" to "1" and "1", respectively.

You will identify deposits by typing the letter "D" in the DEPOSIT (D) category. These steps tell AppleWorks to accept a single character entry in the category. Now you will configure the AMOUNT category. Continue as follows:

- Press the Escape Key once to return to the Options Menu.

Figure 4: Budget Expenditures Report

File: CHECKING.1994	Page 1
Report: BUDGET EXPENDITURES	3/7/94
Selection: BUDGET CATEGORY is not blank	
and DATE (mm/dd/yy) equals Jan 1 1994	
through DATE (mm/dd/yy) equals Dec 31 1994	
AMOUNT BUDGET CATEGORY	

\$349.73	Automobile Expense
\$10.00	Charitable Donations
\$351.98	Clothing
\$25.90	Food
\$70.76	Gifts

Figure 5: Uncleared Items Report

File: CHECKING.1994

Page 1

Report: UNCLEARED ITEMS

3/7/94

Selection: CLEARED (X) is blank

DATE (mm/dd/yy)	DEPOSIT (D)	CHECK #	PAYEE	AMOUNT	BALANCE	BUDGET CATEGORY	CL

Feb 1 1994	D			\$1,163.35	\$2,132.78		
Feb 4 1994	D			\$223.49	\$332.51		
Feb 14 1994	D			\$750.00	\$756.36		
Feb 14 1994	D			\$1,163.35	\$1,919.71		
Jan 3 1994		850	American Express	\$600.00	\$2,690.32	Vacation	
Jan 4 1994		861	MasterCard	\$261.95	\$2,428.37	Clothing	
Jan 6 1994		862	Postmaster	\$6.00	\$2,422.37	Personal Expense	
Jan 17 1994		869	Electric Company	\$97.44	\$1,322.04	Utilities	
Jan 17 1994		873	My Favorite Bank	\$1,000.00	\$1,419.48	Housing	
Jan 15 1994		879	Record Club	\$2.89	\$2,419.48	Hobbies & Entertainment	
Jan 20 1994		881	MasterCard	\$90.03	\$1,232.01	Clothing	
Jan 21 1994		883	Ye Olde Gift Shoppe	\$70.76	\$1,161.25	Gifts	

Figure 6: CHECKING.TEMPL4 Data Base

Category	Width	Coordinates
DATE (mm/dd/yy)	15	1, 1
DEPOSIT (D)	12	1, 3
CHECK #	14	21, 3
PAYEE	30	21, 4
AMOUNT	15	21, 5
BALANCE	15	1, 10
BUDGET CATEGORY	25	21, 7
CLEARED (X)	12	40, 12
BANK STATEMENT BAL.	20	40, 13

Figure 7: Entering the Formula for BALANCE

File: CHECKING.TEMPLA FORMULA Escape: Restore former entry

Category: BALANCE
Rules: Formula

=====

Choose item to change:

--> Formula
2. Update empty categories only No

@If([PAYEE]="STARTING BALANCE",[AMOUNT],@If([DEPOSIT (D)]="D",@PriorRec([BALANCE])+[AMOUNT],@PriorRec([BALANCE])-[AMOUNT]))

Type entry or use ⌘ commands 3743K Avail

6. Press the Tab Key until the AMOUNT category appears as the selected category in the upper-left corner of the screen.
7. Choose "Modify rules" and specify "Numbers only".
8. Set "Min/max value" to "0" and "99999.99", respectively. That lets you enter amounts of zero to ninety-nine thousand, nine hundred ninety-nine dollars, and ninety-nine cents. Virtually all checking account transactions fall within that range.
9. Press the Escape Key once to return to the Options Menu.
10. Choose "Set formatting" and specify "Justification" as "Right", "Field width" as "11", "Format" as "Money", and "Decimal Places" as "2".
11. Press the Escape Key to return to the Options Menu.

Next, you will format the BALANCE category so the data base will calculate a running balance each time you enter a transaction. Continue as follows:

12. Press the Tab Key once; the BALANCE category will appear in the selected category area.
13. Choose "Set formatting". Specify "Right" justification, a field width of "14", "Money" format,

decimal places of "2", and "Negative indicator" of "Parentheses".

14. Press the Escape Key to return to the Options Menu.
15. Select "Set auto-recalc" and respond "Yes" so AppleWorks computes the checking account's "running" balance by recalculating the amount that appears in the BALANCE category.

Now, you will configure the CLEARED (X) category. This category helps you reconcile your account with the monthly bank statement. Continue as follows:

16. Press the Tab Key until the CLEARED (X) category appears in the selected category area.

17. Choose "Modify rules" and "Text only".

18. Set "Case" to "Upper case", and "Min/max length" to "1" and "1", respectively. This configures a one-character category where you will type an "X" to indicate that a transaction has cleared the bank.

19. Press the Escape Key once to return to the Options Menu.

Finally, you will configure the BANK STATEMENT BAL. category. This category calculates a bank balance based upon the transactions that have cleared. After you X-off the cleared transactions, this amount should agree with the ending balance reflected on your bank statement.

Continue with these steps to configure the BANK STATEMENT BAL. category:

20. Press the Tab Key once and the BANK STATEMENT BAL. category will appear in the selected category area.
21. Choose "Set formatting" and specify "Right" justification, a "15" character field width, "Money" format, and "2" decimal places.
22. Press the Escape Key to return to the Options Menu. Choose "Set auto-recalc" and respond "Yes".

My Favorite Template...

Updating the Formats

Now you will update the formats for any records in the data base. (This step is not necessary when you have an empty template, but is crucial if you change the format after you enter records in the data base file.) Follow these steps:

1. Press the Escape Key to return to Single Record Layout.
2. Press Apple-U. At the "Update format" prompt, choose "Entire file".

Entering Formulas

Formula-containing categories are a new feature of the AppleWorks 4 data base; the two formulas in CHECKING.TEMPL4 us the program's new @PriorRec function.

Although most of AppleWorks' calculating power works within each data base record, the @PriorRec lets you carry a subtotal forward from one record to the next. You will use this function to calculate the running balance and the current bank statement balance in your checkbook.

The format of the function is

`@PriorRec([CATEGORYNAME])`

where [CATEGORYNAME] identifies the value that will be copied from the previous record. The function works something like the AppleWorks Ditto Command in Multiple Record Layout. The Ditto Command lets you repeat a value or label from one record to the next. However, unlike the Ditto Command, @PriorRec can import values into a selected category from any category in the prior record, not just the same category. (See the sidebar entitled "Understanding the Formula" for a description of the two formulas.)

Follow these steps to enter the formulas:

1. In Single Record Layout, put the cursor in the BALANCE category.
2. Press Apple-O to invoke the Options Menu.
3. Choose "Modify rules". Then choose "Formula" twice.

Figure 8: Entering BANK.STATEMENT.BAL.

File: CHECKING.TEMPL4 FORMULA Escape: Modify rules

Category: BANK STATEMENT BAL.
Rules: Formula

Choose item to change:

--> Formula 2. Update empty categories only No

```
@If([CLEARED (X)]="X",@If([DEPOSIT (D)]="D",@PriorRec([BANK STATEMENT BAL.])+[AMOUNT],@PriorRec([BANK STATEMENT BAL.])-[AMOUNT]),@PriorRec([BANK STATEMENT BAL.])))
```

Type entry or use ⌘ commands 3732K Avail

AppleWorks 4 makes it easy to enter functions in a formula. Press Apple-F when typing a formula and AppleWorks displays a list of the "legal" functions. You highlight the function you want to use, press the Return Key, and AppleWorks inserts the function at the current cursor position in the formula window. Selecting functions from the glossary saves you time and avoids typographical errors when entering a formula.

AppleWorks 4 also makes it easier to enter category names into formulas. Press Apple-C and AppleWorks displays a pop-up list of all the category names in your data base file. Choose the category you want and AppleWorks will type it into the formula.

You will use these features as you continue with these steps:

4. Use the Apple-F and Apple-C commands to enter the formula in Figure 7. Then press the Return Key.

If you make a mistake, AppleWorks will sound an error beep, display an error message, and put the cursor on the error. The most common errors are misspelled category names, missing parentheses, and other typographical errors.

Now continue with these steps to enter the formula for the "BANK STATEMENT BAL." category:

Figure 9: Sample Data for BUDGET.GLOSS

Account Name	Budget Category	Account Name	Budget Category
ACcessories	Home Furnishings	GAS – Propane, BBQ	Hobbies & Entertainment
AIRline Tickets	Vacation	GAS – Vacation	Vacation
BANK Fees	Bank Service Charges	GIFts	Gifts
BUS – Inter-city	Transportation	GROceries	Food
BUS – Intra-city	Transportation	HOUsing	Housing
BUSiness Expense	Business Expense	PERsonal	Personal Expense
CAR – Auto Maintenance	Automobile Expense	REStaurant	Hobbies & Entertainment
CAR – Club Membership	Automobile Expense	REStaurant – Business	Business Expense
CAR – Loan	Automobile Expense	REStaurant – Family	Food
CAR – Vacation	Vacation	REStaurant – Vacation	Vacation
CLOthing	Clothing	SAVings	Savings
DONation	Charitable Donations	SCHool	School
ENTertainment	Hobbies & Entertainment	SPOrts	Hobbies & Entertainment
FOOD	Food	STArting Balance	Starting Balance
FURniture	Home Furnishings	TAXes	Taxes
GAS – Car, routine	Transportation	UTIlities	Utilities

5. Press the Escape Key to return to the Options Menu.
6. Press the Tab Key until the “BANK STATEMENT BAL.” category appears in the selected category area.
7. Choose “Modify rules” and then choose “Formula” twice.
8. Type the formula in *Figure 8* into the formula rectangle. Then press the Return Key.
9. Press the Escape Key twice, save the template, then press the Escape Key to return to the Main Menu.

Creating the BUDGET.GLOSS Data Base

Setting up budget categories is challenging enough without having to remember dozens of codes.

AppleWorks 4’s new “glossary” feature creates a “pick list” from which you can choose any budget category you defined. Follow these steps to create the glossary:

1. Start a new data base file named “BUDGET.GLOSS”.
2. Create the categories “Account Name” and “Category”.
3. In Multiple Record Layout, use Apple-L to widen the categories to 25 and 30 characters,

respectively. Then press the Escape Key, select “Right”, and press the Return Key.

4. Type the sample account names and categories shown in *Figure 9*. The first three characters of each account name is the abbreviated account code. When you use the glossary with the CHECKING.TEMPL4 data base, you will see how the glossary saves data entry time. Usually all you will have to do is type a 1-, 2-, or 3-letter code. AppleWorks will automatically find the matching account name and display the category.
5. Put the cursor in the “Account Name” column and use Apple-A to arrange the entries alphabetically “From A to Z”.
6. Save the BUDGET.GLOSS data base.

Linking the Glossary to the Check Register

Now, you will link the glossary data base to the checking account data base template. Follow these steps:

1. Use Apple-Q to switch to CHECKING.TEMPL4.
2. In Single Record Layout, move the cursor to the “BUDGET CATEGORY” field.
3. Press Apple-O to access the Options Menu.

My Favorite Template...

4. Select "Modify rules" and "Glossary".
5. AppleWorks will present a list of all the other data base files on your current desktop. Select "BUDGET.GLOSS" and press the Return Key.

Although you will not change them, take a moment to review the glossary options on the screen; they provide some insight into the glossary function. For example, "Allow partial matches" is enabled. This means that all you have to do is type "DON" if you write a check to the Salvation Army. AppleWorks will automatically link this code with the "DONations" Account Name in the glossary and will display the "Charitable Donations" Category as the result in the "BUDGET CATEGORY" field.

For practice, follow these steps to enter a budget category:

1. Press the Escape Key twice to return to the Single Record Layout.
2. Type "CAR" into the "BUDGET CATEGORY" field and press the Return Key. You defined more than one "CAR" related account, so a pop-up "pick list" appears that displays all the Account Names you defined in the BUDGET.GLOSS file. The cursor automatically falls on a "CAR" related account.
3. Use the Up and Down Arrow Keys to highlight the specific account name and press the Return Key. The correct account category ("Automobile Expense" or "Vacation") will automatically appear in the BUDGET CATEGORY field in your checking account transaction register.
4. Press Apple-Y to remove any label in the BUDGET CATEGORY field. These steps only demonstrated the glossary's usefulness.

Completing the Check Register Template

Now you will enter the first transaction in the check register template. This transaction establishes a theoretical starting date of January 1, 1994 and a starting balance of zero. You will change these later when you use the template. Follow these steps to complete the blank template:

1. In Single Record Layout, enter the date "1/1/94" in the DATE (mm/dd/yy) category. [Ed: You can

use "Date/Time Options" in the Standard Settings Menu" to set the date display to the format you prefer. When you enter a date as mm/dd/yy in this data base, AppleWorks will automatically convert it to your preferred format.]

2. Enter a "D" in the DEPOSIT (D) category and press the Return Key.
3. Press the Tab Key to jump to the PAYEE category and enter "STARTING BALANCE". Use all uppercase letters; "STARTING BALANCE" appears in capital letters in the formula, so you must enter it in capital letters here.

The STARTING BALANCE is not a deposit, nor is a "PAYEE" involved, but you have to create a record for the "STARTING BALANCE" because it is the starting point or basis upon which calculations are made. Continue with these steps to complete the STARTING BALANCE record:

4. In the AMOUNT category enter "Ø" (zero).
5. In the CLEARED (X) category, type "X".
6. Press Apple-K to "Recalculate" the data base across the "Entire file". The BALANCE and BANK STATEMENT BAL. categories should both display "\$0.00".
7. Save the template.
8. Press the Escape Key to return to the Main Menu.
9. Select "Other Activities", then "File Activities", and then "Lock files". Choose "CHECKING.TEMPL4" to protect the template.

Using the Checking Account Template

The template operates much like a handwritten check register. Follow these steps to set up your checking account:

1. Load a copy of the template onto the desktop.
2. Use Apple-N to change the name of the template to "CHECKING.1994".
3. Add the "BUDGET.GLOSS" file to the desktop.
4. Use Apple-Q to switch to "CHECKING.1994".

You will now edit the record that contains "STARTING BALANCE" in the PAYEE category.

My Favorite Template...

In Single Record Layout, enter the date of the first transaction you want to include in the data base. If your checking account is relatively new, enter the date you opened the account at the bank. The most important thing to remember is that the “STARTING BALANCE” transaction record must pre-date any other transactions you enter. If in doubt, leave the date as “1/1/94” (which is the default date in the CHECKING.TEMPL4 template). *[Ed: To enter today’s date, press Apple-Y to “yank” out the original entry, type an @ sign (a shifted-2), and press the Return Key.]*

Continue editing the STARTING BALANCE record as follows:

5. Use Apple-Y to erase the “Ø” in the AMOUNT category. Enter the ending balance from your most recent bank statement.
6. Leave the BUDGET CATEGORY field blank. The starting balance is not an expense item.
7. Press Apple-K and the Return Key to update “This Record”. The BALANCE and BANK STATEMENT.BAL categories should both match the amount you entered in the AMOUNT category in step #5.

Now you will enter all your uncleared deposits and outstanding checks, including those that you wrote since your last bank statement. Continue with these steps:

8. Press Apple-Down Arrow to add a new data base record and enter the first outstanding deposit. Save your file occasionally as you add new records to your checking account data base.
9. Continue adding records to accommodate all your outstanding deposits.
10. Complete a data base record for each outstanding check.
11. Press Apple-K and recalculate the “Entire File”. The BALANCE in the last record should match the balance in the handwritten register you kept prior to “computerizing” your checking account. The BANK STATEMENT BAL. category will not change until you reconcile your account with the next statement you receive from the bank.

From this point on, you will add a new record for each deposit you make or check you write. You will enter other kinds of withdrawals (automatic debits, ATM withdrawals, or bank service charges) just like you entered checks. Enter a code such as “AUTO” (to track “automatic” transactions such as an automatic monthly deduction to pay your house mortgage), “ATM”, or “SC” (“service charge”) in the CHECK # category.

You can also customize the BUDGET.GLOSS file as you proceed. Delete any sample accounts you do not want and create new ones that are appropriate for your budget. Be sure to save both files (CHECKING.1994 and BUDGET.GLOSS) after making any changes.

Reconciling Your Checkbook

When you receive your next monthly statement, open your data base and follow these steps:

1. If necessary, create a new record and enter the monthly service charge as a debit. Enter any interest income as a deposit.
2. Press Apple-Z to switch to Multiple Record Layout.
3. Put the cursor in the BALANCE column and press Apple-T to set Titles at the “Left side”. That will let you display the CLEARED (X) category while you view check numbers, deposits, and amounts. *[Ed: Any records with blank check numbers are deposits.]*
4. Type an “X” in the CLEARED (X) column for each cleared deposit and transaction.
5. Use Apple-Z to switch to Single Record Layout.
6. Press Apple-9 to move to the last record in the data base.
7. Press Apple-K to recalculate the entire data base and to update all balances. The amount in the BANK STATEMENT BAL. category should match the amount of the ending balance on the bank statement.
8. In Multiple Record Layout, press Apple-T to change Titles to “None”.

My Favorite Template...

If the balances do not match, print a CHECK REGISTER report like the one described in the next section. Check the list for data entry errors. Remember to press Apple-K to recalculate the data base if you find and correct any errors.

Creating the Check Register Report

The CHECK REGISTER report is a tables format report that includes all the data base categories except BANK STATEMENT BAL. (see *Figure 3*). The register fits across a single sheet of paper when you use condensed (17 characters-per-inch) printing. Follow these steps to set up the CHECK REGISTER report:

1. From the CHECKING.1994 data base, press Apple-P to go to the Report Menu. Create a new tables format report from the current record layout. Name the report "CHECK REGISTER".
2. Use Apple-D to delete the BANK STATEMENT BAL. category.
3. Narrow the CLEARED (X) category to two characters wide. The "Length" should now be 136 characters.
4. Put the cursor on the DATE (mm/dd/yy) category and arrange the records in "Chronological" order.
5. Press Apple-O to access the Printer Options Menu and change the characters-per-inch setting to "17" and double-space the report.
6. Print the report.
7. Save your file.

Creating the Budget Expenditures Report

This report consolidates and totals your year-to-date expenses according to the accounts entered in the BUDGET CATEGORIES field (see *Figure 4*). These accounts are automatically entered from the BUDGET.GLOSS glossary you created earlier. Follow these steps to create the report:

Understanding the Formulas

BALANCE:

```
@If([PAYEE]="STARTING BALANCE",[AMOUNT],@If([DEPOSIT (D)]="D",@PriorRec([BALANCE])+[AMOUNT],@PriorRec([BALANCE])-[AMOUNT]))
```

The formula says: "If the PAYEE category includes the phrase, 'STARTING BALANCE', this is neither a deposit nor a debit, so display the value that appears in the AMOUNT category as the checking account BALANCE for this record.

"However, if the DEPOSIT category contains a 'D', a deposit was made and the account balance should be increased. Take the BALANCE from the previous record and add the deposit amount to it.

"If the DEPOSIT category does not contain a 'D' (because it is blank), the value in the AMOUNT category is a disbursement and should be subtracted from the checking account balance. Take the balance from the previous record and subtract the current record's amount from it. That will generate the current checking account BALANCE."

BANK STATEMENT BAL.:

```
@If([CLEARED (X)]="X",@If([DEPOSIT (D)]="D",@PriorRec([BANK STATEMENT BAL.])+[AMOUNT],@PriorRec([BANK STATEMENT BAL.])-[AMOUNT]),@PriorRec([BANK STATEMENT BAL.])))
```

This formula says: "If there is an 'X' in the CLEARED (X) category, you must include the transaction in the calculation of the current bank statement balance. If the transaction is a deposit, add the amount to the previous BANK STATEMENT BAL. If it is not a deposit, then it is a check or debit; subtract the amount from the previous BANK STATEMENT BAL. If there is no 'X' in the CLEARED (X) category, then display the BANK STATEMENT BAL. from the previous transaction record."

1. With the CHECKING.1994 data base on your screen, press Apple-P and create a new tables format report from the current record layout. Name the report "BUDGET EXPENDITURES".
2. Use Apple-D to delete all the categories except AMOUNT and BUDGET CATEGORY.
3. Put the cursor in the AMOUNT column and press Apple-T to total the values in that category. Accept "1" for "Blank spaces after this category".

4. Put the cursor in the "Ln42" column to the right of the BUDGET CATEGORY column. Press Apple-A to arrange the data base "From A to Z" on the BUDGET CATEGORY column. *[Ed: Because of a bug in AppleWorks 4.0, you must put the cursor in the "Ln42" column when you want to arrange the records in the right-most column. The AppleWorks 4.02 updater fixed this bug. If you updated to AppleWorks 4.02, put the cursor in the BUDGET.CATEGORY column and press Apple-A.]*
5. Put the cursor in the BUDGET CATEGORY column and press Apple-G to "Group" transactions according to category. At the "Print group totals only?" prompt, select "Yes".
6. Press Apple-R and create the following Record Selection Rule: "BUDGET CATEGORY is not blank and DATE (mm/dd/yy) equals 1/1/94 through 12/31/94".
7. Press Apple-P to print the report on paper or on the screen.

Now you will return the data base records to their correct sequence. Continue as follows:

8. Press the Escape Key twice to return to Single Record Layout.
9. Press Apple-Z to switch to Multiple Record Layout.
10. Put the cursor in the DATE (mm/dd/yy) column and arrange the items in chronological order. Arranging records in Multiple Record Layout mode makes it easier to see if the arrangement worked as anticipated.
11. Press Apple-Z to return to Single Record Layout.
12. Save your file.

Creating the Uncleared Items Report

Instead of viewing or printing the complete CHECK REGISTER to see which checks are outstanding or which deposits have not yet cleared the bank, you can create a "reconciliation" report that shows only uncleared deposits and checks (see Figure 5). Follow these steps to create the report:

1. With the CHECKING.1994 data base on your screen, press Apple-P to access the Report Menu.
2. Choose "Duplicate an existing format" and "CHECK REGISTER".
3. Press Apple-Y to erase the name CHECK REGISTER. Type the name "UNCLEARED ITEMS" and press the Return Key.
4. Put the cursor on the CHECK # column and arrange the records alphabetically "From A to Z".

AppleWorks will arrange the transactions according to the ASCII (American Standard Code for Information Interchange) equivalent of the values in the CHECK # category. All deposits will appear at the beginning of the UNCLEARED ITEMS list. All checks will be arranged in numerical order. Continue with these steps to finish setting up the report format:

5. Press Apple-R and enter the following Record Selection Rule: "CLEARED (X) is blank".
6. Press Apple-P to print the report on paper or on the screen.
7. Repeat steps #8 through #12 under "Creating the Budget Expenditures Report".

Conclusion

AppleWorks 4's data base module offers calculated categories, spreadsheet-like functions, and "pick list" glossaries. This article describes how to use these features to create an AppleWorks 4 home accounting system without using macros and other add-ons for the program.

[Stan Hecker is on the administrative staff at Michigan State University, East Lansing, Michigan, and is a partner in H&H Consulting, a Michigan concern specializing in school district financing and population analyses.]

[Ed: A working copy of these templates appears on this month's NAUG on Disk which costs \$10 from NAUG. NAUG on Disk requires a 3.5-inch disk drive; the templates require AppleWorks 4.]

RoadRunner Hard Disk Drive Systems

by Cynthia E. Field and Diane Wilkens

Nothing can enhance your Apple II more than a hard disk drive. Once you use a hard drive, you will wonder how you ever got along without it. Whether you use an Apple II at home, in school, or at the office, these high-capacity storage devices offer unparalleled convenience. The new RoadRunner series of hard drives from Memory Plus Distributors is no exception.

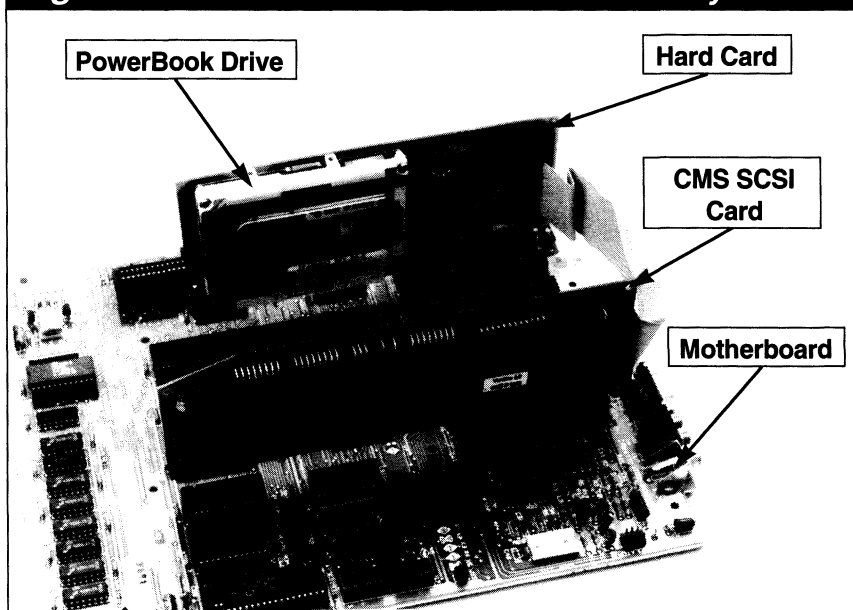
The complete RoadRunner hard drive system (see *Figure 1*) includes a SCSI (Small Computer Systems Interface) hard drive mounted on a "hard card," a SCSI interface card, and a ribbon cable. The system requires two slots inside your Apple IIe or IIGS; you cannot use RoadRunner hard drives with an Apple IIc or IIc Plus. As the figure shows, the ribbon cable connects the two RoadRunner system circuit boards. All RoadRunner hardware is warranted for one year.

Uses PowerBook Hard Drives

RoadRunner hard drives come with either 20 megabytes or 40 megabytes capacity. Each 2.5-inch drive is small and compact, measuring three inches wide by four inches long. It is less than one-half-inch thick.

The RoadRunner drives are built with Quantum or Conner mechanisms; both are well-respected hard drive manufacturers. These are the drives used in the early Macintosh PowerBook computers, which explains their small size, low power requirements, and inexpensive price. (It probably also explains

Figure 1: RoadRunner Hard Disk Drive System



why we found an Apple logo sticker on two of the drives we evaluated.) The drives, which are designed to work in cramped quarters inside a PowerBook, remain cool inside an Apple II. They do not require a cooling fan, which makes them extremely quiet; that is a pleasant change from other hard drives we use with our Apple IIs.

Multi-Purpose Hard Card

The RoadRunner hard drive comes pre-installed on a card that serves as the mounting platform for the drive and draws power to run the drive from the Apple II motherboard. A DIP (Dual Inline Package) switch block on the card lets you select the SCSI ID number and termination status. *[Ed: Each SCSI device you use with a computer must have a unique number, and the last device in the "chain" must supply termination power to the chain.]*

A Hard Drive and AW – A Great Combination

Adding a hard drive to your Apple II will dramatically enhance your productivity with AppleWorks. Once you install the drive, a simple keyboard command or mouse-click is all that it takes to launch AppleWorks or any other program on the drive. You do not have to switch disks to load AppleWorks; you simply choose AppleWorks from a program launcher screen. And you will never again have to insert your AppleWorks Program Disk in a floppy drive before you print a file. After you install AppleWorks on a hard drive, the program is always ready. What a time-saver, especially for teachers who work under the pressure of short class periods! A hard disk can also free up floppy disk drives that you can use with other Apple IIs. For the hardware-hungry school (And what school isn't?), this is no small bonus.

Because hard drives can hold large amounts of data, AppleWorks power users can install every TimeOut application, macro, and SuperFonts font, and still have room to spare for data files. Depending on the size of your software library, a hard drive of only modest capacity can often store all of your favorite applications, educational programs, and games.

Even a 20-megabyte hard drive, which is lilliputian by Macintosh or PC Windows standards, can store the equivalent of about 125 5.25-inch Apple II disks or 25 3.5-inch disks. If you use AppleWorks and just a few other programs, a 20-megabyte drive is probably all you will need. A 40-megabyte hard drive is the minimum you need if you use an Apple IIGS and GS-specific software, or if your Apple IIe software library is unusually large.

Most hard drives feature speedy access times and fast data transfer rates. Compared to a hard drive, a CD-ROM drive is slow, and a floppy drive is glacial.

In short, a hard drive can let you concentrate more on the AppleWorks project at hand and less on the mechanics of computing. I don't know anyone who has ever regretted buying a hard drive.

The RoadRunner comes ready to install; you do not have to change any DIP switches unless you already have SCSI devices attached to your Apple II or you add SCSI devices later.

The card has a red LED (light-emitting diode) to indicate that it is receiving power, but the LED is not visible under the cover on your Apple II. The inaccessibility of the LED does not affect the

RoadRunner's quiet, fast, and reliable performance.

All SCSIs Are Not Equal

Your Apple II uses a SCSI interface card to control the drive, and Memory Plus ships a CMS SCSI II v.2.0 interface card with each RoadRunner. RoadRunners also work with the Apple II High-Speed SCSI Card, but the CMS interface is a less expensive alternative.

However, Memory Plus reports that several 20-megabyte drives did not work properly with CMS SCSI cards when connected to Apple IIGS computers running GS/OS. As a result, the company recommends the Apple II High-Speed SCSI Card for use with the IIGS, which adds \$50 to the cost of the system.

The Right Connections

Installing the two circuit cards requires several steps, but the process takes about five minutes, even for a novice. *[Ed: This assumes that you have available slots in your Apple. The more crowded the slots, the more difficult the installation.]*

You install the hard card in any available 50-pin expansion slot; the company recommends that you use slot 3 or 4 in an Apple IIe or slot 5 in a IIGS. Then you install the SCSI card in slot 5 in the IIe or slot 7 in the IIGS. Of course, the slots you choose will depend on the other expansion cards in your computer.

On the Apple IIGS, you set the Startup slot in the Control Panel to the slot that contains the SCSI card. On an enhanced

Apple IIe, you leave the floppy drive doors open to boot directly from the RoadRunner. On an unenhanced IIe, you must press Control-Reset to invoke the Applesoft prompt; then type PR#5 and press the Return key to start the RoadRunner.

RoadRunner drives are pre-formatted and come with ProDOS installed on the drive. The 20-megabyte drive comes configured with one parti-

tion. To accommodate the limitations of ProDOS, the 40-megabyte drive ships with one 32-megabyte and one 8-megabyte partition.

If 40 megabytes is not enough space, you can expand your storage capacity by swapping the drive mechanism for any higher capacity 2.5-inch drive advertised for PowerBook computers. The drive slides into a connector on the hard card, where it is held in place by two screws. You can also buy a \$10 SCSI daisy-chain cable from Memory Plus and connect any standard external SCSI drive to your chain. We did not test the CMS SCSI card with daisy-chained drives.

Documentation Snags

While installing the RoadRunner hardware is easy, the piecemeal documentation makes learning how to use the drive daunting.

The RoadRunner comes with three sets of documentation: A two-page installation guide, a 36-page CMS SCSI Card Guide, and an 11-page guide to ProSel Lite, the disk management utility included with the hardware. Each set of documentation was produced by a different company with different writing styles and formats. And each was unaware of the other components in the RoadRunner package. You must switch back and forth between the "manuals" to learn how to install and use your drive.

The RoadRunner installation instructions are more pragmatic than attractive, but they provide sufficient hand-holding for all but the most technophobic Apple II user.

The "CMS SCSI Card Installation Guide" and CMS Enhancements' Apple II SCSI Utility v.2.1 let you re-format and re-partition the drive. The CMS card's built-in Integrated Control Panel software lets Apple IIe users examine the number and status of the available hard disk volumes.

Each RoadRunner comes with ProSel Lite (a program selector) on the drive. Once you install the drive, ProSel Lite appears almost instantly when

Product Information

RoadRunner Hard Drive System for Apple IIe

20 Mb drive, CMS SCSI II Card, and cable: \$149

40 Mb drive, CMS SCSI II Card, and cable: \$199

RoadRunner Hard Drive System for Apple IIGS

20 Mb drive, Apple II High-Speed SCSI Card, and cable: \$199

40 Mb drive, Apple II High-Speed SCSI Card, and cable: \$249

Memory Plus Distributors, 7902 E. Pierce Street, Scottsdale, Arizona 85257; (602) 820-8819; Fax: (602) 968-3211.

you turn on the computer. Unfortunately, learning how to use ProSel Lite will take some effort, and the documentation lacks the figures and screen shots that could make the instructions easier. The documentation also assumes that you already installed the programs you want on the drive. New users should plan to spend an hour installing AppleWorks and then adding it to the ProSel Lite menu.

Apple IIGS users can get around these software installation and ProSel Lite hurdles by installing the Apple IIGS System software and by using the Finder to copy and launch programs.

An integrated, comprehensive instruction manual would be a noticeable improvement over the disparate documents included in the RoadRunner box; the RoadRunner documentation appears to be an afterthought.

Conclusion

The typical RoadRunner configuration includes a 20- or 40-megabyte hard drive preinstalled on a hard card with an attached ribbon cable and a CMS SCSI II card. For as little as \$149 you get a quiet, fast, cool-running, reliable SCSI hard drive and interface and ProSel Lite, a stripped-down version of the popular ProDOS program selector.

RoadRunner drives offer excellent value, particularly for the Apple IIe. Just be prepared to spend some time learning to use ProSel Lite. Once you do, you will be amazed at how a hard drive can breathe new life into AppleWorks. The RoadRunner lets you enjoy hard drive benefits at a floppy drive price.


[Dr. Cynthia E. Field has been reviewing Apple II

Hardware Review...

hardware and software since 1982. She is the Contributing Editor of the *AppleWorks Forum*.]

[Diane Wilkens is the Computer Coordinator at Msgr. Matthew F. Clarke School in Wakefield, RI.]

[NAUG members considering a hard drive should also read Gary Morrison's "Apple II Hard Disk Primer" which describes how to install, configure, and use a hard drive with AppleWorks, PublishIt!, and other applications on Apple IIe and IIGS computers. The "Apple II Hard Disk Primer" lists for \$19.95, but is available for \$5 plus \$3.50 s/h while supplies last.]



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NAUG News

Still Doing Your Taxes?

If you are still completing your 1993 tax forms, you should get 1040Works, NAUG's collection of professionally-developed templates that will make your job easier. You enter the data in the template, press Apple-K, and AppleWorks does all the work. Find a last minute deduction? It's no problem with 1040Works. Just change the value in the template, press Apple-K, and 1040Works makes all the changes to your computations. 1040Works costs \$29.95 plus \$3.50 s/h directly from NAUG. (Non-NAUG members: add \$3.) Supplies of 1040Works are limited; orders are filled on a first come, first served basis. Credit card orders only.

Self-employed individuals, investors, and others who pay estimated taxes or who do tax planning should also order the 1040Works Tax Planner. The 1040Works Tax Planner templates calculate your quarterly estimated tax payments and withholding and help you develop effective tax-saving strategies. The package costs \$29.95 plus \$3.50 s/h (\$19.95 including shipping if ordered with 1040Works).

You need an Apple II equipped with at least 512k of memory and AppleWorks 2.0 or later to use either of these products.

[NAUG, Box 87453, Canton, Michigan 48187; (313) 454-1115; Fax: (313) 454-1965.]

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2. Notes: A note is a brief article or Quick Tip about a single theme.
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2. If possible, send both paper and disk copies of notes and articles. If you do not submit a printed copy, please include a note describing what is on the disk. All submissions become the property of NAUG.
3. All submissions to the *AppleWorks Forum* should include your name, address, and telephone number. We will cite you as the author of the letter, note, or article, but will not include your address or telephone number unless you specifically request that those be published. The Editor will make any necessary editorial changes to your submission. Mail your submission to: Cathleen Merritt, Editor; *AppleWorks Forum*; Box 87453; Canton, MI 48187.

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